Application No. 09/350,466
Filed: July 9, 1999
Group Art Unit: 1743

REMARKS

1. This is in response to the Office Action mailed May 1, 2003. Claims 21-23, 25-29, 31-34, and 37-46 remain pending in this application.

2. Applicant appreciates the courtesy extended by the Examiner in allowing a telephone interview on August 5, 2003. Participating were Examiner LaToya I. Cross, Dr. Louis Stuhl (co-inventor), and Arthur S. Morgenstern (attorney of record). Several figures and tables were faxed to the Examiner for use in the interview, and copies of those items (slightly modified) are enclosed.

3. Based on the discussion with examiner, Applicant has amended the independent claims to include within the body of the claim the fact that the gas or liquid analytes are detected.

4. Applicant requests reconsideration of the rejections under 35 USC 102 based on Haas.

a. Haas does not detect chemical analytes. The reaction in Haas begins only when the 2 layers (12 and 14 in Haas) are joined.

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Thus Haas is a device that is a time indicator. (See the title of Haas, which is consistent with this description of his device.)

b. There is no dye adsorbed on solid in Haas. See page 2 of the enclosed fax, where the thick arrow (labeled "do not correspond") shows where the layer in the instant invention (layer numbered 18) contains dye on solid (indicator / adsorbant), while the corresponding layer in Haas (labeled 36) contains only dye and adhesive.

c. The plasticizer in Haas is the activator. I.e., when the 2 layers are joined, the plasticizer from sub-layer 20 in back layer 14 of Haas migrates into the front layer (12) and dissolves the dye (in sublayer 36), allowing it to migrate to the viewing layer, thus creating the color.

On the other hand, in the instant invention, the plasticizer serves as a facilitator for dye migration. It is not the cause of dye migration.

d. Note that pages 2-4 of the figures used the interview relate to differences between the instant invention and Haas. The

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Summary table (page 4 of the enclosed fax) summarizes the differences between the 2 technologies.

5. Applicant requests reconsideration of the rejections under 35 USC 103.

a. The differences between the instant invention and Haas were discussed above.

b. In Burleigh, the dye changes color via a chemical change while it remains attached to the carrier solid. The figure on page 7 of the attached fax (Figure B), shows that the color change occurs while the dye remains attached to the solid in Burleigh. On the other hand, in the instant invention, the dye migrates away from the solid, when it is displaced by the gas or liquid analyte.

c. In the interview, the Examiner asked for an example where the analyte displaced the dye. Dr. Stuhl indicated that the last paragraph of Example 1 (page 28, line 3ff of the original application) indicated that the optical reflection density (OD) at the beginning of the experiment was 0.22, which is nearly white in color. After exposure to dichloromethane, the indicator had an OD of 0.84, which was deep magenta, showing the displacement of dye

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into the concentrating layer. When exposed to toluene vapors, a new indicator displayed an OD of 1.44, even a darker color, indicating migration of dye into the concentrating layer.

d. None of the claims relate to a single layer. Although this terminology appeared in the original version of claims 24 and 25, it should be noted that claim 24 was cancelled in the Amendment filed 11/5/01.

Claim 25 was amended on 11/5/01 to refer to a first region, which is applied as a coating material. The multi-layer detection element claimed in the instant application allows transfer of dye across layers when desorbed by target analyte. This is significantly different from the single layer apparatus referred to by the Examiner (e.g., test strip), which is characterized by migration along the same layer of the test strip.

e. Thus the Summary table explains that the instant invention is different from both Haas and Burleigh individually, as well as the combination of Haas and Burleigh.

Note that only one of the 3 cases in the combination of Burleigh plus Haas is described in the Summary table. (This is case 2, where the dye does not migrate.) In the other 2 cases,

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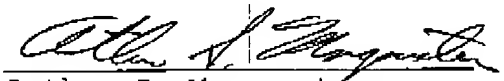
the dye does migrate away from the solid, but only when the plasticizer from the activator layer is brought into contact with the front layer containing the indicator dye. However, even in these 2 possible combinations of Haas and Burleigh, the solid is not involved in the analyte response, and there is a chemical reaction involved to produce the color change.

The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

MARK T. SPITLER ET AL

By: 

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